

the mesothorax, the upper mark, however, is not so dark in color as on the preceding segment and bears more setæ, which are less circular in arrangement. The venter differs from that of the mesothorax, only in having the chitinous areas near the caudal margins darker in color. The front leg, Fig. 11, is little more than half the length of the succeeding legs, but is more robust. It bears three stout spurs on the inner angle next to the tarsus and one isolated spur on the distal margin. On the inner margin of the basal segment of the tarsus there is a single row of short stout spines. The inner surface of the tibia bears numerous very short spines. The inner surface of the femur is sparsely armed with short triangular teeth. The coxa, on its inner margin, has a few short spines and over its entire surface has rows of fine, short hairs like those described for the frons. The two succeeding legs (Fig. 12 shows the hind leg), differ from the front leg in being longer and less robust and in having fewer and weaker short spines. Each of these legs has but one tibial spur.

The Abdomen is cylindrical and almost uniform in circumference throughout its length. The humps on the first segment are not greatly developed. The lateral humps bear an area of short curved spines whose points are directed forward. The gills are distributed on segments 2-8, above and below the lateral line, as diagrammed in Fig. 10. The lateral line, near the caudal margin of the seventh abdominal segment, ends at the beginning of a fleshy raised line, Fig. 16, which crosses the suture between the seventh and eighth segment and, inclining upward, extends to the caudal margin of the eighth segment. Each side of this fleshy line is armed with curved, bifurcate spines directed backward. The anal hooks and the arrangement of setæ on the last abdominal segments are shown in Figs. 16 and 17.

Pupa: Length, 13 mm. Mandible Fig. 20. Tarsi flattened and fringed on each side by a row of black swimming hairs. Lateral line black. A narrow black line parallels the lateral line beneath, to the caudal margin of the eighth segment, where the two converge. A narrow black line above the lateral line contains the spiracles. Abdominal segments 2-9 with paired tufts of hair near their caudal margins above. On the caudal margin of the first abdominal segment there is a pair of lobes, Fig. 18, covered with sharp spines. Above these lobes are sparse backward-pointing teeth. The chitinous plates of the abdomen are shown in Fig. 18. The posterior end of the pupa is represented in Fig. 19.

TWO NEW SPECIES OF BORBORIDÆ.

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Leptocera frosti sp. nov.

Female: Shining black. Front broad, face light brown, vibrissæ large, with a row of six smaller bristles extending to the posterior angle of the cheek, above this row near the middle, two prominent bristles, mouth parts and antennæ black, second joint slightly longer than the third, arista dark brown, pubescent and

about as long as the head. Thorax with prominent bristles, scutellum with four strong marginal bristles; pleura brownish below the humeri and wings; a long curved bristle midway between the base of the wing and posterior coxa. Abdomen with a large bristle at the posterior angles of the third and fourth segments. Legs black, bases of the femora and all of the tarsi brown; middle tibiae with two very large, spine-like bristles at about one-fourth the length of the tibia from the base, and a corresponding pair at about one-fourth the length of the tibia from the apex, the intermediate and apical spines much smaller; metatarsi with three large, apical spines; posterior femora with an upper and lower row of large bristles. Halteres black. Wings dark smoky brown, with the greater portion of the first basal cell, the anterior and middle of the discal cell, a long slightly curved stripe in the middle of the marginal cell, and a large crescent shaped mark beyond the discal cell, subhyaline; the bristles on the first section of the costa double the length of those on the second and third, the length of all the sections about equal. Length 2.5 mm.

One specimen, Framingham, Mass., Oct. 19, 1913, collected by Mr. C. A. Frost while sifting for coleoptera and presented with many other interesting species to the New England collection of the Boston Society of Natural History.

Leptocera palliceps sp. nov.

Female: Front, face and occiput light yellow, shining; antennae dark brown with prominent bristles, third joint hairy, arista pubescent, as long as the width of the head; vertex with three orbital bristles on each side with narrow black lines extending from the central bristles to a point at the vertex, ocelligerous area brown and bearing two bristles; tip of the proboscis black. Thorax and abdomen black, shining. Legs yellow, middle and posterior femora black. Wings brownish hyaline, with a slightly darker spot in the marginal cell. Length of the third section of the costa about double the length of the second. Length 1mm.

One specimen, Clemonton, N. J., May 12, 1899. Type in the author's collection. This little species seems to be readily distinguished by its entirely light yellow head.

HEMIPTERA-HETEROPTERA OF MAINE.

CORRECTIONS AND ADDITIONS.

Since the publication of my list,¹ it has come to my notice that there are a number of changes which should be made in the records. Some of these have been very kindly brought to my attention in correspondence, others I have noted myself. I am changing here chiefly such things as might cause confusion, preferring to leave for the present matters which are more or less debatable. In a

¹ Psyche, Vol. XXI., 1914, p. 139.